Irrigation Revenue Report of the Bombay Presidency (excluding Sind)

For the Year 1923-24

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IRRIGATION REVENUE REPORT, BOMBAY PRESIDENCY, EXCLUDING SIND, 1923-24.

PART I.

COMPRISING IRRIGATION WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.

GENERAL REMARKS.

Works in operation. The following list includes all the works in operation (44 in number) :—

Collectorate.	No.	Names of works.	Area of four months' crops which could be irrigated in normal years with a duty at the head of the canal of 120 acres for the monsoon season and 120 acres for the rabi season per cusec.	Whether supply is reliable or dependent on local rain.	Storage Works completed or proposed.	Remarks.
		Productive.	Acres.			
Belgaum ..	1	Gadikeri Tank .	418	Dependent on local rain.	Completed ..	Deccan catchment.
Kanara ..	2	Mavinkop Tank.	617	Do. ..	Do. .	Forest catchment, reliable.
West Khandesh.	3	Shahada Channel.	2,000	Reliable ..	No storage work.	Hilly catchment Supply is perennial.
		Unproductive.				
Ahmednagar.	4	Pravara River Works—Pravara Right Bank Canal.	24,656 for completed canal.	Dependent on local rain.	Storage work at Lake Arthur Hillin progress.	Ghat catchment.
Nasik ..	5	Girna Left Bank Canal.	Information not avilable.	Reliable ..	Chankapur Tank completed.	Do.
Nasik ..	6	Godavari Left Bank Canal ..	21,136	Do. ..	Lake Beak completed.	Do.
Ahmednagar.		Godavari Right Bank Canal.	35,600 These are projected figures subject to alteration.			

Note.—In this report whenever "the average" is referred to, it is the average for the past three years, unless otherwise defined.

Collectorate.	No.	Names of works.	Area of four months' crops which could be irrigated in normal years with a duty at the head of the canal of 120 acres for the monsoon season and 120 acres for the rabi season per cusec.	Whether supply is reliable or dependent on local rain.	Storage Works completed or proposed.	Remarks.
		Unproductive—contd.	Acres.			
Poona ..	7	Nira Canal including Shetphal Tank.	1,00,000	Reliable ..	Lake Whiting completed.	Ghat catchment.
Sholapur ..	8	Mhaswad Tank .	17,975	Dependent on local rain.	Completed ..	Deccan catchment.
Ahmedabad .	9	Hathmati and Khari Cut Canals.	24,000	Do. ..	No storage work. Bokh Reservoir and Chandola Tank and Wasai Reservoir completed.	The catchment of the Hathmati River is hilly covered with forest and that of Khari is undulating ground at its source and then plain ground with cultivated fields. Supply depends chiefly on the flow in the rivers, contents of the Bokh reservoir and the Chandola Tank and Wasai Reservoir.
West Khandesh.	10	Lower Panjhra River Works.	8,173	Panjhra River supply not reliable.	Mukti Tank completed.	Ghat catchment for one part and Deccan catchment for the rest.
Nasik ..	11	Kadwa River Works { Palkhed Canal.	7,228	} Reliable ..	Waghad Tank completed.	Ghat catchment.
		Ojhar Tambat Canal.	550			
		Wadali Canal.	970	....	No storage proposed.	
Ahmednagar ..	12	Pravara River Works—Lakh Canal.	582	Reliable for monsoon and rabi.	Storage work at Lake Arthur Hill in progress.	Ghat catchment.
Poona ..	13	Mutha Canals including Matoba Tank.	49,000	Reliable ..	Lake Fife completed.	Do.
Sholapur ..	14	Ekruk Tank ..	13,070	Dependent on local rain.	Completed ..	Deccan catchment.
Satara ..	15	Krishna Canal..	6,412	Reliable ..	Proposed ..	Ghat catchment.
Kaira ..	16	Wangroli Tank.	3,400	Dependent on local rain.	Completed ..	Ordinary catchment on plain ground.

Collectorate.	No.	Names of works.	Area of four months' crops which could be irrigated in normal years with a duty at the head of the canal of 120 acres for the monsoon season and 120 acres for the rabi season per cusec.	Whether supply is reliable or dependent on local rain.	Storage works completed or proposed.	Remarks.
		Unproductive—contd.	Acres.			
Kaira—*contd.*	17	Tranza Nagrama Tank.	800	Dependent on local rain.	Completed ..	The Tranza Tank has no independent catchment. The Nagrama Tank has a catchment of 1·50 square miles. Both are fed by the Matar Drainage Channel which is not at all reliable as it seldom flows.
	18	Savli Tank ..	3,000	Do. ..	Do. ..	Ordinary catchment on undulating ground.
	19	Sajat Tank ..	2,000	Do. ..	Do. ..	Ordinary catchment on flat ground.
Panch Mahals	20	Futelao Tank ..	800	Do. ..	Do. ..	Hilly catchment.
East Khandesh.	21	Hartala Tank ..	978	Do. ..	Do. ..	Deccan catchment.
	22	Mhaswa Tank ..	3,256	Do. ..	Do. ..	Do.
	23	Jamda Canals ..	42,000	Girna River supply not reliable.	Storage tanks on the Girna, the Manad and the Panjan rivers under contemplation. Water is issued from the Chankapur Tank when available.	Ghat catchment for a small part and for the rest Deccan catchment.
Nasik ..	24	Parsul Tank ..	3,400	Dependent on local rain.	Completed ..	Deccan catchment.
Ahmednagar.	25	Pravara River Works-Pravara Left Bank Canal.	6,852	Do. ..	Storage work at Lake Arthur Hill in progress.	Ghat catchment.
	26	Bhatodi Tank ..	1,461	Do. ..	Completed ..	Deccan catchment.
Poona	27	Kasurdi Tank ..	150	Dependent on local rain.	Do. ..	Do.
	28	Shirsuphal Tank.	1,350	Do. ..	Do. ..	Do.
	29	Bhadalvadi do.	1,800	Do. ..	Do. ..	Do.

Collectorate.	No.	Names of works.	Area of four months' crops which could be irrigated in normal years with a duty at the head of the canal of 120 acres for the monsoon season and 120 acres for the rabi season per cusec.	Whether supply is reliable or dependent on local rain.	Storage works completed or proposed.	Remarks.
		Unproductive—concld.	Acres.			
Sholapur	30	Koregaon Tank	416	Dependent on local rain.	Completed.	Hilly catchment.
	31	Ashti Tank ..	3,382	Do. ..	Do. ..	Deccan catchment.
	32	Pathri Tank ..	3,094	Do. ..	Do. ..	Hilly catchment.
Satara	33	Rewari Canal ..	439	Do. ..	*Nil.*	Deccan catchment.
	34	Upper Man River Works.	373	Do. ..	Pingli Tank completed.	Do.
	35	Yerla River Irrigation Works.	1,182	Do. ..	Nehr Tank completed.	Do.
	36	Chikhli Canal ..	355	Do. ..	*Nil.*	Do.
	37	Maini Tank ..	455	Do. ..	Completed ..	Do. Supply from catchment is good.
Bijapur ..	38	Muchkundi Tank.	750	Do. ..	Do. ..	Deccan catchment.
Belgaum ..	39	Gokak Canal 1st section.	17,627	Reliable ..	Twenty-seven feet completed.	Ghat catchment.
Dharwar	40	Dambal Tank ..	531	Dependent on local rain.	Completed ..	Deccan catchment.
	41	Medleri Tank ..	231	Do. ..	Do. ..	Do.
	42	Madag Tank ..	1,418	Do. ..	Do. ..	Ghat and forest catchment.
	43	Asundi Tank ..	303	Do. ..	Do. ..	Deccan catchment.
	44	Dharma Canal .	For monsoon season, 6,586 acres. For rabi—*Nil.*	Do. ..	No storage works but canal takes off from the river itself.	Forest catchment.

Nos. 45 to 50 Maladevi Tank, Budhihal Tank, Nira Right Bank Canal, Gokak Canal Survey, Victoria Tank and the Suki River Project are not included as the works were not in operation in the year under report.

Interest Account.

2. The interest account for the year stands as follows :—

—	Amount.			—	Amount.		
	Productive Works.	Unproductive Works.	Total.		Productive Works.	Unproductive Works.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Total interest charges during 1923-24 ..	3,689	32,96,945	33,00,634	Net revenue realized during 1923-24..	7,193	13,33,656	13,41,149

Net loss—Difference between interest and net revenue .. Rs. 19,59,485

Revenue.

3. The gross revenue realised from all sources during the year after deducting refunds of revenue (Rs. 20,049) was Rs. 24,64,925 of which Rs. 24,43,698 were direct and Rs. 21,227 indirect receipts. The net revenue actually realized was Rs. 13,41,149. The figures of gross revenue and net revenue show a decrease of Rs. 80,360 and Rs. 1,84,727 respectively when compared with those of 1922-23.

Area under command and irrigable area.

4. The gross area under command was 1,376,502 acres and the area irrigable at present is 494,919 acres.

5. The financial results of the year by main heads were as follows :—

—	Area irrigated.	Revenue realized.			Working expenses.	Net revenue.
		Direct receipts.	Share of land revenue.	Total.		
	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.
Productive ..	3,481	5,291	9,237	14,528	7,035	7,493
Unproductive ..	2,63,901	24,38,407	11,990	24,50,397	11,16,741	13,33,656
Total ..	2,67,382*	24,43,698	21,227	24,64,925	11,23,776	13,41,149

*Includes 9,328 acres on which a consolidated water and land assessment is levied.

Areas irrigated.

6. The figures showing areas irrigated, revenue assessed and realised and working expenses, as compared with those of the previous ten years are as follows : —

Years.	Areas irrigated.	Revenue.		
		Assessment.	Realization.	Working Expenses.
	Acres.	Rs.	Rs.	Rs.
1913-14	203,338	17,59,548	17,39,483	6,51,890
1914-15	159,730	16,05,516	16,98,838	7,50,066
1915-16	136,375	15,29,165	15,84,169	7,24,668
1916-17	110,169	15,03,154	16,46,539	7,29,348
1917-18	138,628	17,75,865	15,42,347	7,77,313
1918-19	203,040	22,94,781	12,72,404	8,45,275
1919-20	236,325	17,72,490	19,26,047	8,65,642
1920-21	264,699	24,41,998	22,98,132	9,23,280
1921-22	251,392	24,08,118	25,61,905	11,23,639
1922-23	278,202	26,25,308	25,45,285	10,19,409
Average for ten years	198,189	19,71,593	18,81,564	8,41,053
1923-24	258,054	28,47,586	24,64,925	11,23,770

There was a decrease of 20,148 acres in the total area irrigated as compared with the previous year. The variation in each division is explained below:—

Southern Division.

There was an increase of 248 acres during the year owing to the fact that the rainfall was not so favourable as in the previous year resulting in demand for water.

Central Division.

In this Division also there was an increase of 7,232 acres.

Deccan Irrigation Division.

In this Division there was a decrease of 14,505 acres due to the abnormally short rainfall during the rabi season and as the supplies available in both Lake Whiting and Lake Fife for the hot weather of 1923 were low, it was found necessary to restrict the overlapping sugarcane on both the Nira Left Bank and Mutha Canals and to reduce the perennial area on the latter canals.

Northern Division.

A decrease of 13,123 was due to the fact that there was insufficient supply of water owing to the rain being much below the average.

Collection of revenue.

7. The state of the collections was as follows :—

	Rs.	Rs.
Balance of demands unrealised at the commencement of the year		7,13,547
Demands of the year—		
Rabi, 1922-23	5,86,954	
Kharif, 1923-24	17,29,155	
Miscellaneous receipts	3,03,985	
		26,20,094
Total ..		33,33,641
Deduct—		
Remissions		712
Net total ..		33,32,929

			Rs.
Amount unrealised at the close of the year	..		8,69,182
Actual receipts of the year	..	24,63,747	
Add—			
Share of Land Revenue	..	21,227	
	Total	..	24,84,974
Deduct—			
Refunds of Revenue ..	..	..	20,049
Revenue realized as per paragraphs 3, 5, and 6..			24,64,925

The remissions and refunds together amount to Rs. 20,761. The amount unrealised at the close of the year amounted to Rs. 8,69,182 and it is more than that at the close of the last year by Rs. 2,10,404. The largest amount was outstanding in the Deccan Irrigation Division. The unrealised balance in Northern Division was also heavy. The total is made up as follows : —

			Rs.
Hathmati and Khari Cut Canals	..	..	72,377
Ekruk Tank	..	..	18,386
Krishna Canal	..	..	22,793
Mhaswad Tank	..	..	10,524
Gokak Canal 1st section and storage works		..	1,673
Madag Tank	..	..	4,518
Dharma Canal	..	..	5,349
Kadwa River Works	..	..	28,139
Chankapur Tank	..	..	2,360
Godavari Canal	..	..	2,76,810
Pravara Canal	..	..	63,975
Pravara Left Bank Canal	..	..	1,83,918
Mutha Canal including Matoba Tank		..	1,57,259
Nira Canal and Shetphal Tank	..	..	16,485
Other works	..	..	4,616
		Total ..	8,69,182

A large portion of this amount has already been recovered since the close of the year and steps are being taken to recover the balance.

Working Expenses.

8. The total working expenses for the year amounted to Rs. 11,23,776 against Rs. 10,19,409 in the previous year showing an increase of Rs. 1,04,367 distributed as follows :—

———	1922-23	1923-24	Difference.
	Rs.	Rs.	Rs.
Productive	4,635	7,035	2,400
Unproductive	10,14,774	11,16,741	1,01,967
Total ..	10,19,409	11,23,776	1,04,367

The main increase was in the Central and Deccan Irrigation Divisions where the total working expenses amounted to Rs. 1,27,363 and Rs. 9,06,614 against Rs. 1,12,517 and Rs. 8,21,172 respectively in the previous year.

9. The following table contrasts the charges under the principal heads with those of the two previous years :—

———	1921-22	1922-23	1923-24
	Rs.	Rs.	Rs.
Works	98,834	39,536	29,377
Repairs	4,12,964	4,16,221	4,70,931
Establishment	4,09,859	3,72,403	4,27,197
Tools and Plant ..	17,932	13,986	14,526
Total in the Public Works Department ..	9,39,589	8,42,146	9,42,031
Collection charges	1,21,438	1,20,533	1,17,033
Indirect charges	62,612	56,730	64,712
Total ..	11,23,639	10,19,409	11,23,776

Details of working expenses.

10. The following table gives the details of the working expenses of some of the principal works :—

Name of work.	Average incidence of water rate per acre.	Cost of measurement.		Working expenses total in the Public Works Department excluding indirect charges.	
		Total cost.	Per acre.	Per mile of main canal.	Per acre irrigated.
	Rs.	Rs.	Rs. a. p.	Rs.	Rs.
Pravara Right Bank Canal ..	9·65	680	0 0 3½	1,844	4·82
Pravara Left Bank Canal ..	11·06			1,808	3·19
Girna Left Bank Canal ..	6·60	726	0 1 5	1,649	3·96
Godavari Canals	11·73	1,340	0 0 5	1,884	4·26
Nira Canal & Shetphal tank	9·63	7,457	0 1 7	2,013	2·64
Mutha Canals & Matoba Tank	15·09	1,995	0 1 7	1,332	6·47
Kadwa Canals	8·93	137	0 0 4¾	693	2·87
Gokak Canal, 1st section ..	5·15	2,382	0 3 11	4,052	1·72
Dharma Canal	5·47	396	1 10 5	55	4·39
Krishna Canal	9·07	1,150	0 1 11	620	2·33
Yerla River Irrigation works	4·67	700	0 1 11	525	2·97
Rewari Canal	6·92	30	0 1 10	513	9·90
Upper Man River Works ..	4·40	60	0 1 9	151	4·75
Chikhli Canal	2·94	40	0 1 14	143	2·88
Jamda Canals	4·50	75.12	0 1 6	212	10·31
Tanks.					
Bhasvad Tank	6·24	352	0 0 6	212	1·25
Parsul Tank	4·90	74	0 1 10	....	1·33
Madag Tank	5·60	....	....	248	3·00
Ekruk Tank	5·67	127	0 0 8	283	4·46
Ashti Tank	5·30	61	0 0 3¾	221	1·82
Mainl Tank	4·41	220	0 1 11	461	2·39

11. The gross assessed revenue, direct and indirect as shown in statement IV-C accompanying the Irrigation Administration Report for 1923-24 was Rs. 28,47,586 against Rs. 26,25,308 of the previous year. The increase was mostly due to the development of sugarcane area on the Godavari and Pravara Canals in the Deccan Irrigation Division.

Gross-assessed Revenue.

The details of the gross assessment were as follows: —

	Direct Revenue.			Indirect revenue.	Total.
	Water rates.	Other receipts.	Total.		
	Rs.	Rs.	Rs.	Rs.	Rs.
Productive ..	6,190	46	6,236	9,237	15,473
Unproductive ..	25,16,184	3,03,939	28,20,123	11,990	28,32,113
Total ..	25,22,374	3,03,985	28,26,359	21,227	28,47,586

12. The net assessed revenue of the year after deducting working expenses, including indirect and other charges, was Rs. 17,23,810, as compared with Rs. 16,05,899 in 1922-23.

Net assessed Revenue.

13. The following table shows percentage of the return earned on capital outlay on some of the principal works in operation:—

Name of work.	Total capital outlay (direct and indirect).	Gross receipts (direct and indirect).	Working expenses (direct & indirect).	Net revenue.	Percentage on capital outlay (column 2).	Remarks.
1	2	3	4	5	6	7
	Rs.	Rs.	Rs.	Rs.	Rs.	
Hathmati and Khari Cut Canals ..	13,18,729	53,754	36,055	17,699	1·34	
Lower Panjhra River Works	4,68,621	26,576	4,643	21,933	4·68	
Krishna Canal ..	9,45,477	75,447	27,801	47,646	5·04	
Gokak Canal ..	13,81,922	67,637	17,902	49,735	3·60	
Kadwa River Works ..	10,35,483	51,596	20,352	31,244	3·02	
Godavari Canals ..	1,02,53,935	5,56,441	2,63,774	2,92,667	2·85	
Mutha Canal including Matoba Tank ..	65,39,953	3,28,348	1,38,104	1,90,244	2·91	
Nira Canal & Shetphal tank	66,41,703	5,93,561	2,44,961	3,48,600	5·25	
Tanks,						
Ekruk Tank ..	13,40,386	1,37,778	20,936	1,16,842	8·72	
Ashti Tank ..	8,41,708	26,426	7,423	19,003	2·26	
Mhasvad Tank ..	20,96,016	53,355	17,807	35,548	1·69	
Maini Tank ..	4,91,613	9,091	4,886	4,205	0·86	
Chankapur Tank ..	20,49,962	53,881	35,582	18,299	0·89	
Shirsuphal Tank ..	2,24,568	7,367	3,213	4,154	1·85	

14. The water rates in force during the year are shown in Statement I-F accompaying the Irrigation Administration Report for 1923-24. In the remarks entered in the statement the resolutions sanctioning the water rates are quoted.

Water rates.

15. The average water rates per acre of land actually irrigated were :

Productive works	..	Rs. 1·77
Unproductive works.	..	,, 9·53

16. The water rate assessments and other receipts compare with those of the previous year as under:—

	1922-23.	1923-24.
	Rs.	Rs.
Water rates	22,70,280	25,22,374
Other receipts—		
Plantations	17,917	11,625
Water power	14,313	25
Miscellaneous	2,86,708	2,92,335
Total ..	3,18,938	3,03,985
Share of land revenue ..	36,090	21,227
Total ..	3,55,028	3,25,212
Grand Total ..	26,25,308	28,47,586

Crop acreage.

17. The principal crop acreages irrigated during 1922-23 and 1923-24 were as follows :—

—	1922-23	1923-24	Difference.
	Acres.	Acres.	Acres.
Gardens and orchards ..	3,431	3,606	175
Sugarcane	28,745	34,821¾	6,076¾
Wheat	28,447	25,295½	— 3,151½
Rice	7,994	1,679	— 6,315
Maize	3,054	3,409	355
Jowar	54,769	60,699¼	5,930¼
Bajri	39,829	36,590	— 3,239
Gram, etc.	18,198	14,783	— 3,415
Groundnut	18,511	18,589	78
Condiments	5,055	6,532½	1,477½
Cotton	2,805	3,947	1,142
Fodder crops	4,128	6,643	2,515

The total estimated value is shown as Rs. 4,30,33,639 against Rs. 3,84,89,907 in the previous year and Rs. 3,93,24,814 for the year 1921-22. These estimated crop values are only approximate as there is no uniform method of estimating them.

18. In Statement I-E accompanying the Irrigation Administration Report for 1923-24 the duty of water on each work as well as the basis on which the duties were calculated, etc., are shown. The results vary with the nature of the crops irrigated, perennial crops requiring much water than cereals. To obtain a correct comparative result it is necessary to consider the area of each class of crop grown under the canals concerned. Statement G affords means for such a comparison.

Duty of Water.

DETAILED REPORTS BY LOCAL OFFICERS.

AHMEDABAD AND KAIRA AND PANCH MAHALS DISTRICTS.

Works without storage and dependent on local rain.

(9) HATHMATI AND KHARI CUT CANALS.

19. **The area irrigated, net assessment, average water rate and working expenses** on these canals compare with the averages as under :—

Year.	Kharif.		Rabi.		Total.		Average water rate assessed per acre.	Working expenses.
	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Rs.	Rs.
Average*	9,307	45,709	4,329	10,542	13,636	56,250	4·00	37,355
1923-24 ..	53	162	26	48	79	210	2·65	36,055

* *Note.*—In this report whenever "the average" is referred to, it is the average of the last three years unless otherwise defined.

The decrease in the **kharif** and **rabi** areas was due to rainfall during the year under report being unfavourable for rice crops.

20. The **miscellaneous revenue** realised was Rs. 8,789 against Rs. 5,836 in the previous year.

21. **Remission** of Rs. 3 was granted as rice seedlings at first watered by the canal dried up.

22. The **gross revenue** realised from all sources amounted to Rs. 53,753 and exceeded the working expenses by Rs. 17,698 showing a return of 1·34 per cent. on the total capital outlay, exclusive of interest.

23. The **realisations** are satisfactory considering the unfavourable nature of the season and when compared with Rs. 56,108 the average. Rs. 47,436 stand unrealised on account of the failure of crops. This sum will be recovered during the year 1925-1926.

24. The **rainfall** gauged at Himatnagar at the head of the Hathmati canal was 10·63 inches and 0·31 inches respectively in the **kharif** and **rabi** seasons, and at Raipur at the head of the Khari Cut canal it was 14·21 inches in the **kharif** season, and *nil* in the rabi season.

Works with storage tanks dependent on local rain.

25. The **area irrigated, net assessment,** and **working expenses** under the Wangroli, Savli, Saiat, Tranza Nagrama and Futelao tanks, compare with the averages as under :—

Name of Tank.	Year.	Kharif.		Rabi.		Total.		Working expenses.
		Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Rs.
Wangroli ..	Average ..	1,001	4,116	463	1,423	1,463	5,539	8,061
	1923-24 ..	..	..	..	..	..	..	5,470
Savli ..	Average ..	1,028	4,006	607	1,295	1,635	5,301	6,348
	1923-24 ..	7	7	..	..	7	7	5,158
Saiat ..	Average ..	139	624	265	974	404	1,598	6,203
	1923-24 ..	12	45	..	..	12	45	4,990
Tranza Nagrama	Average ..	14	48	12	24	26	72	2,517
	1923-24 ..	..	..	2	6	2	6	2,755
Futelao ..	Average ..	11	29	47	143	58	172	1,745
	1923-24 ..	..	..	37	118	37	118	1,502

(16) Wangroli Tank.

26. There was no surplus water from the previous year for irrigating hot weather crops and the tank was empty throughout the year owing to deficient rainfall.

27. The **miscellaneous revenue** amounted to Rs. 604 as against Rs. 298 of the previous year.

28. **Remission** of Rs. 26-8-0 was granted.

29. The **rainfall** gauged in the tank catchment was 13·20 inches.

(18) Savli Tank.

30. The tank received a little replenishment which was utilised partly in giving one watering to rice crops in the **kharif** season and partly for domestic purposes. No rabi and hot weather crops were raised.

31. The **miscellaneous revenue** amounted to Rs. 416 as against Rs. 720 of the previous year.

32. The **rainfall** gauged at the tank was 14·20 inches.

(19) Saiat Tank.

33. The storage of the previous year was utilised in irrigating hot weather crops, mainly wheat and maize, after which the tank remained empty.

34. The **miscellaneous revenue** amounted to Rs. 1,128 as against Rs. 295 of the previous year.

35. The **rainfall** gauged in the tank catchment was 9·77 inches.

(17) Tranza Nagrama Tanks.

36. These tanks were empty throughout the year. They have no independent catchment basins of their own and there was no flow in the feed channel. A little lift irrigation was however made from the well in the bed.

37. The **miscellaneous revenue** amounted to Rs. 219 as against Rs. 1,104 of the previous year.

38. The **rainfall** gauged at Nagrama tank was 11·44 inches during the year and it was about the same at Tranza tank.

(20) Futelao Tank.

39. The tank filled partly as the rainfall in its catchment was below normal. There was no demand for water in the **kharif** season, whereas in the **rabi** season 37 acres were irrigated against 83 acres in the previous year. There was no surplus water of the previous year for hot weather crops.

40. The **miscellaneous revenue** amounted to Rs. 140 as against Rs. 196 of the previous year.

41. The **rainfall** gauged at the tank was 14·92 inches.

POONA IRRIGATION DISTRICT.

Works with Ghat Storage.

(7) Nira Left Bank Canal and Shetphal Tank.

42. On the 1st April 1923 the level of water in Lake Whiting at Bhatgar was 66·23 feet above the sills of lowest outlets. The lowest level recorded was 52·80 feet on the 1st July, the contents being 1,090 ·45 million cubic feet; the water reached the crest of waste weir, 75 feet on gauge, on the 17th July. The draw-off from storage, which had ceased on the 3rd July, was resumed on the 11th October with full supply level, *i.e.*, 83 feet, in the lake and by the 31st March 1924 the level went down to 55·80 feet on gauge.

43. The average of the readings of the several rain gauges in the catchment of the lake, 128 square miles, was 142·85 inches and the run-off amounted to 40,340 million cubic feet. The rainfall was much

below normal in the catchment of the lake and deficient in the canal tract.

44. Water in the Setphal tank reached its lowest level, **viz.**, 18·90 feet, on the 6th July 1923, when replenishment from the Nira Left Bank Canal commenced and the full supply level of 37 feet was reached on the 24 September. The supply from the canal ceased on the 28th September.

45. The subjoined table shows the **results of irrigation, revenue,** etc. during the year compared with the average :—

Area irrigated.		Assessment.		Gross assessment.	
1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
Acres.	Acres.	Rs.	Rs.	Rs.	Rs.
77,340	72,506	7,45,231	6,80,871	7,57,442	6,89,161

Working expenses.		Realisation.		Average rainfall of five stations.	
1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
2,44,961	2,13,338	5,93,561	8,30,649	14·10	22·40

46. The increase in the area irrigated and in the assessment was partly due to increase in the perennial area owing to ample supply being available in the lake in the hot weather of 1923 due to satisfactory late winter rains of 1922, which made it possible to allow overlapping **adsali** to the fullest extent, and partly to the keen demand for water for seasonal crops due to deficient rainfall in the canal tract.

47. **Refunds of revenue** amounted to Rs. 913.

48. The **area under 'perennial blocks'** on the Nira Left Bank Canal (including that sanctioned on the lift irrigation scheme of the Nira Valley Sugar Company) was about 15,801 acres, and 8,042 acres under **'eight months' or 'rabi leases'**. The area under **'eight months' leases'** on the Shetphal tank was 722 acres.

49. The **cost of the measuring establishment** works out at Rs. 7,457 which gives a rate of about 1 anna 7 pies per acre against 1 anna 8 pies per acre in the previous year.

(47) Nira Right Bank Canal.

50. This new canal is to be fed from the storage at Bhatgar conjointly with the Nira Left Bank Canal. To provide the necessary increase

in the capacity of the lake a higher dam—the Lloyd dam—is being constructed to replace the existing smaller one.

51. The works were started in 1912 and passed through various vicissitudes consequent on the war. They have progressed well in more recent years and it is hoped to commence irrigation in 1924-25.

52. About 27 lakhs of cubic feet of masonry were added to the Lloyd dam during the year, bringing the total up-to-date to about 172½ and leaving a balance of about 42½ lakhs to be done. It is hoped to complete the dam in the year 1926, by which date the first 90 miles of the 110 miles of the Nira Right Bank Canal should also be approaching completion.

53. The expenditure incurred on these works up-to-date is as under :—

—	During the year.	Total up-to-date.
	Rs.	Rs.
The Lloyd dam at Bhatgar ..	14,30,744	1,01,92,780
Nira Right Bank Canal ..	15,81,613	1,33,78,634
Establishment and Tools and Plant, Suspense accounts, etc. ..	9,91,865	66,76,471
Less receipts on capital account ..	—26,519	— 63,599
Total ..	39,77,103	3,01,84,286

54. The total estimated cost of the scheme is Rs. 4,91,10,800 inclusive of all charges.

55. The storage provided by the Lloyd dam at Bhatgar will not suffice for the full development of irrigation in the Nira Valley and a complete scheme which provides for widening and remodelling the Left Bank Canal and for building a new dam at Vir to supplement the supply from Bhatgar costing over 1¼ crores of rupees is under the consideration of Government of India.

(13) Mutha Canals including Matoba Tank.

56. On 1st April 1923 the level of water in Lake Fife was 22·75 feet above the sills of sluices. The lowest level reached was 9·80 feet on the 30th June 1923, the contents being 758·26 million cubic feet, thereafter replenishment commenced, the water reaching the crest of the waste weir, 26 feet above sluice-sills, on the 14th July. The draw-off from storage commenced on the 6th October, and on the 31st March 1924 the level was 16·70 feet on the gauge.

57. The average of the readings of the several rain gauges in the catchment of the lake, 196 square miles, was 121·95 inches, and the run-off amounted to 45,436 million cubic feet. The rainfall in the canal tract was 15·56 inches. The rainfall was satisfactory in the catchment in the early part of the monsoon but later was not so satisfactory. The

rainfall in the canal tract was poor in the monsoon season and practically nil in the rabi season.

58. The Matoba tank which had dried up on the 15th June 1923 remained empty till the 20th July when it began to be replenished from the Mutha Right Bank Canal. The replenishment was however slow, and the tank reached its full supply level, viz., 29 feet, on the 17th September.

59. The following table gives a comparison of the **results of irrigation' revenue**, etc., during the year with the average :—

Area irrigated.		Assessment.		Gross assessment.	
1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
Acres.	Acres.	Rs.	Rs.	Rs.	Rs.
*18,146	*20,372	*2,73,475	*2,68,245	3,44,480	3,31,531

Working Expenses.		Realisation.		Average rainfall of six stations.	
1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
1,38,104	1,27,546	3,28,348	3,38,925	37·41	39·93

*Includes 28 acres indirectly irrigated and Rs. 52 revenue derived therefrom.

60. The fall in the area irrigated was due to curtailment of rabi area which was restricted to the first 30 miles of the canal owing to unsatisfactory rainfall in the rabi season. The increase in the assessment was due to the increase in the perennial area owing to ample supply being available in the lake in the hot weather of 1923 due to satisfactory late winter rains of 1922, which made it possible to restore to the full extent the perennial area reduced in the previous years due to short supply.

61. The **refunds of revenue** amounted to Rs. 589.

62. The **cost of the measuring establishment** was Rs. 1,995 which gives a rate of about 1 anna 7 pies per acre, the same as in the previous year.

63. The areas of " eight months' leases " on the Mutha Canals and the Matoba tank were about 407 and 1,081 acres respectively.

64. The quantity of water supplied during the year from the Mutha Right Bank Canal to the Poona Cantonment and the Poona City Municipality was 83,23.20,000 and 1,56,11,20,000 gallons respectively ; the corresponding receipts which are icluded in the statement given above being Rs. 26,634 and Rs. 24,978 respectively.

Storage Works dependent on local rains.

(27) Kasurdi Tank.

65. This tank, which had remained empty since 22nd December 1922, received its first replenishment on the 17th September 1923, and the full supply level of 17·46 feet was reached on the 20th September on which date it was filled to overflowing. Water was issued for flooding lands for sowing rabi crops and the tank dried up on the 21st October.

(28) Shirsuphal Tank.

66. This tank, which had not dried up during the previous year, received very small replenishment during the months of June and September 1923. The highest level reached was 22·40 feet against the full supply level of 31 feet. Water was issued for the irrigation of monsoon and rabi crops, and the tank finally dried up on the 31st January 1924.

(29) Bhadalwadi Tank.

67. This tank, which had not dried up during the previous year, received very small replenishment during the months of July and October 1923. The highest level reached was 25·95 feet against the full supply level of 35 feet. Water was issued for the irrigation of monsoon and rabi crops and the tank dried up on the 18th November 1923.

68. The subjoined table shows the **rusults of irrigation, revenue,** etc., during the year compared with the average :—

Name of Tank.	Area irrigated.		Assessment.		Gross assessment.	
	1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
	Acres.	Acres.	Rs.	Rs.	Rs.	Rs.
Kasurdi ..	34	73	72	96	636	1,081
Shirsuphal ..	1,537	1,132	6,958	4,541	10,673	5,142
Bhadalwadi ..	820	1,321	2,830	5,412	3,114	9,826

Name of Tank.	Working expenses.		Realisation.		Rainfall.	
	1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
	Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
Kasurdi ..	1,024	1,699	611	1,079	6·91	12·18
Shirsuphal ..	3,213	3,164	7,367	5,290	7·86	13·05
Bhadalwadi ..	3,408	3,859	4,921	9,682	10·06	17·70

69. The decrease in the area irrigated and in the assessment under the Kasurdi and Bhadalwadi tanks was due to meagre replenishment. The increase in those under the Shirsuphal tank was due to a larger demand for water for monsoon and rabi crops owing to deficient rainfall. The increase in the gross assessment from this tank was due to the sale of babul trees.

MALSIRAS DISTRICT.

Storage Works with Deccan Catchment.

(8) Mhaswad Tank.

70. Though the catchment of this tank is 480 square miles the supply is very unsatisfactory due to the precarious character of the rainfall. On the 1st April 1923 the level of water in the tank was 20·20 feet, the contents being 1,978·83 million cubic feet. On the 15th June the level went down to 15·30 feet, the contents being 1,295·45 million cubic feet. Ordinary applications for the eight months' crops were accepted for the monsoon season only due to insufficient supply of water. In the beginning of September however the tank received replenishment which made it possible to meet later on the demands for rabi crops also. The depth of water in the tank when full is 24 feet, the corresponding contents being 2,601 million cubic feet.

71. The average of the several rain gauge readings in the catchment (480 square miles) was 8·32 inches, and the run-off amounted to 2,431 million cubic feet.

72. The following table shows the **results of irrigation, revenue,** etc., during the year compared with the average :—

Area irrigated.		Assessment.		Gross assessment.	
1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
Acres.	Acres.	Rs.	Rs.	Rs.	Rs.
11,253	10,561	70,236	64,347	84,138	72,205

Working expenses.		Realisation.		Rainfall.	
1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
17,807	26,646	53,362	63,679	7·74	16·20

73. The increase in the area irrigated and in the assessment was due to the greater demand for water owing to insufficient rainfall. The

increase in the gross assessment is partly due to the above cause and partly to the fact that practically all the land in the tank basin was let out for cultivation.

74. The **refunds of revenue** sanctioned during the year amounted to Rs. 14,120.

Remissions amounted to Rs. 16.

75. The **cost of the measuring establishment** was 6 pies per acre, the same as in the previous year.

PRAVARA CANALS DISTRICT.

Works with Ghat Storage.

(6) Godavari Canals.

76. The lowest level of water in Lake Beale was 7·70 feet above the sills of lowest sluices on the 24th June 1923, when the first replenishment was received, and the lake filled to overflowing on the 22nd July. The quantity stored for irrigation was 7,513 million cubic feet, corresponding to a depth of 65 feet. The draw-off commenced on the 4th November.

77. The yield from the catchment of Lake Beale (156 square miles) was 25,132·00 million cubic feet, the average of the several rain-gauge readings being 90·26 inches.

78. The following table shows the **results of irrigation revenue,** etc., during the year compared with the average :—

Name of work.	Area irrigated.		Assessment.		Gross assessment.	
	1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
	Acres.	Acres.	Rs.	Rs.	Rs.	Rs.
Lake Beale ..	346	360	1,367	1,006	..	..
Godavari Right Bank Canal.	31,891	29,050	3,60,088	3,30,392	6,30,470	5,84,021
Godavari Left Bank Canal.	19,570	18,429	2,44,058	2,30,463	..	..

Name of work.	Working expenses.		Realisation.		Rainfall.	
	1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
	Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
Lake Beale	....	....	....	....	....	....
Godavari Right Bank Canal.	2,63,774	2,40,229	2,56,446	5,39,382	15·21	14·22
Godavari Left Bank Canal.	....	....	....	....	15·33	14·22

79. The increase in the area irrigated and in the assessment was partly due to the extension of sugarcane cultivation and partly to the

increased demand for water during the rabi season due to the unfavourable monsoon.

80. The **refunds of revenue** sanctioned during the year amounted to Rs. 2,077.

81. **Remissions** amounted to Rs. 145.

82. The **cost of the masuring establishment** amounted to Rs. 1,340 which works out at 5 pies per acre against 6 pies per acre of the previous year.

(4) Pravara River Works.

83. This system which is under construction since 1911 is nearing completion. The masonry dam at Bhandardara which will be 270 feet high and about 1,600 feet long has now almost reached the designed height. The storage capacity amounts to 10,831 million cubic feet (to be increased to 12,894 million cubic feet when necessary) and the reservoir will protect some of the lands most affected by famine in the Ahmednagar Collectorate. The culturable area under command is 182,976 acres, of which 57,000 acres are expected to be irrigated annually and 75,000 acres when the storage is increased.

84. The progress of the work was satisfactory. As work progresses irrigation is being extended. A large sugar factory owned by the Belapur Company has already started operations near Belapur railway station. This concern will eventually bring about 2,000 acres under sugarcane every year out of about 6,000 acres which the Company have acquired.

85. The total estimated cost of the scheme is Rs. 1,50,83,481 inclusive of all charges. The expenditure incurred on the works up to date is as under :—

—	During the year.	Total up to date.
	Rs.	Rs.
Lake Arthur Hill Storage ..	4,17,628	64,72,430
Pravara Canals ..	1,88,197	38,90,069
Establishment and Tools and Plant, etc.	1,83,645	27,31,254
Less receipts on capital account ..	—12,971	—28,683
Total ..	7,76,499	1,30,65,070

86. As the existing basin at Ojhar pick up weir is too small to meet the requirements of irrigation, investigations are in hand for providing a balancing tank at the head of the canals. The possibility of developing hydro-electric power, both at the foot of the dam at Bhandardara and at a point a little lower down the river where a natural fall of about 200 feet exists, is also being kept in view in case there should be a demand.

87. The run-off from the catchment of 47 square miles was 22,038 million cubic feet, the average of rain-gauge readings being 226·53 inches.

88. The **results of irrigation, revenue,** etc., during the year, compared with the average are as under :—

Name of Work.	Area Irrigated.		Assessment.		Gross assessment.	
	1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
	Acres.	Acres.	Rs.	Rs.	Rs.	Rs.
Pravara Right Bank Canal.	12,616	14,921	1,21,708	62,615	1,24,813	64,405
Pravara Left Bank Canal.	26,713	22,248	2,95,386	1,17,187	2,96,648	1,18,511

Name of Work.	Working Expenses.		Realisation.		Rainfall.	
	1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
	Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
Pravara Right Bank Canal.	70,777	39,853	1,13,194	34,555	14·68	13·68
Pravara Left Bank Canal.	1,02,369	54,138	2,19,388	58,197	13·22	13·52

89. The increase in the area irrigated and in the assessment was partly due to development of irrigation and partly to the increased demand for water for sugarcane crops. On the Pravara Right Bank Canal the increase in revenue was very large in spite of a decrease in area due to the fact that owing to the extension of sugarcane cultivation seasonal irrigation during both the monsoon and rabi seasons had to be restricted.

On both the Pravara Right and Left Bank Canals irrigation is developing very fast as a result of the adequate storage now available at Bhandardara. The development is, however, restricted to the cultivation of cane only, and very little attention is paid to the growing of other less paying crops.

90. The **refunds of revenue** sanctioned during the year amounted to Rs. 430.

91. The **cost of the measuring establishment** amounted to Rs. 680 which gives a rate of 3½ pies per acre against 9 pies per acre for the previous year.

Works without storage but on a River with Ghat Catchment.

(12) Lakh Canal.

92. This small and old canal is supplied from a pick-up weir on the Pravara river and has not been a financial success owing to the inferior design and the poor supply available. Its improvement at a cost of about half a lakh of rupees is now under consideration as owing to development

of irrigation on the Pravara Canals a greater quantity of subsoil water will find its way back into the Pravara river and will be available at the Lakh Canal pick-up weir.

93. The subjoined table shows the results of **irrigation, revenue,** etc., during the year compared with the average :—

Area irrigated.		Assessment.		Gross assessment.	
1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
Acres.	Acres.	Rs.	Rs.	Rs.	Rs.
1,048	650	2,131	1,138	3,484	1,923

Working expenses.		Realisation.		Rainfall.	
1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
3,806	5,841	4,357	1,750	13·57	17·32

94. The increase in the area irrigated and in the assessment was due to the increased demand for water during both the monsoon and rabi seasons owing to the unfavourable monsoon.

95. The gross area commanded by this canal is 29,913 acres, of which 11,280 acres are culturable and irrigable. The revenue derived is comparatively low partly due to the irrigated area being a small fraction of the area irrigable owing to the precarious nature of the supply of water and partly due to the low water rates in force. The results of the year are however satisfactory in both respects in comparison with the average.

96. The **cost of measuring establishment** during the year was 4 pies per acre, against 1 anna 6 pies per acre for the previous year.

NASIK IRRIGATION DISTRICT.

Works with Ghat Storage.

(5) Chankapur Tank, Girna Left Bank Canal.

97. On the 1st April 1923 the water level in the Chankapur storage was 74·06 feet above the sill of the lowest outlet, the corresponding contents being 731 million cubic feet. The level had fallen to 36·12 feet by the 30th June when replenishment began to be received. Thereafter the level gradually rose to 92 feet above the sill of outlet on the 29th October and draw off from the storage commenced on the 11th November.

98. There was a keen demand for water for monsoon crops. The supply was also used for feeding the existing bandharas on the Girna river and for supplementing the supply of the Jamda canals in the East Khandesh District. The tank level on the 31st March 1924 was 75·34 feet above the sill level.

99. The run-off from the catchment of 100 square miles was 4,214 million cubic feet, the average of the rain gauge readings being 57·08 inches.

100. A comparison of the **irrigation, revenue,** etc., pertaining to the year under review with the average is as under :—

Area irrigated.		Assessment.		Gross assessment.	
1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
Acres.	Acres.	Rs.	Rs.	Rs.	Rs.
7,745	6,186	51,142	32,493	51,764	33,105

Working expenses.		Realisation.		Rainfall.	
1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
35,582	27,197	53,881	28,542	56·77	38·93

101. The increase in the area irrigated and in the assessment was partly due to scanty rainfall and partly to the development of irrigation on the whole length of the canal.

102. The **refunds of revenue** amounted to Rs. 29.

103. The **cost of the measuring establishment** was 1 anna 5 pies per acre, against 1 anna and 2 pies per acre for the previous year.

(11) Kadva River Works.

104. On the 1st April 1923 the depth of water in the Waghad tank was 29·50 feet above the sill of outlet, the corresponding contents being 190·43 million cubic feet. The level thereafter went down gradually to 19·20 feet by the 12th June, when the tank began to receive regular replenishments till it overflowed on the 30th August, when the depth of water above the crest of waste weir was 8·10 feet. The draw-off from the storage commenced on the 1st November and the depth of water in the tank fell to 25·25 feet above the sill level on the 31st March 1924.

105. The run-off from the catchment of 29 square miles was 2,610 million cubic feet, the average of the rain gauge readings being 69·08 inches.

106. The subjoined table shows the results of **irrigation, revenue,** etc., during the year compared with the average :—

	Name of work.	Area Irrigated.		Assessment.		Gross assessment.	
		1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
		Acres.	Acres.	Rs.	Rs.	Rs.	Rs.
Kadwa River Works.	Waghad Tank ..	..	..	..	..	522	839
	Palkhed Canal ..	3,009	3,269	25,528	26,596	27,742	28,107
	Ojhar Tambat Canal ..	1,399	1,409	12,268	11,795	14,463	12,005
	Wadali Canal ..	1,423	1,270	11,266	11,124	11,623	11,746

	Name of work.	Working expenses.		Realisation.		Rainfall.	
		1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
		Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
Kadwa River Works.	Waghad Tank ..	4,756	10,030	522	839	69·18	52·69
	Palkhed Canal ..	11,129	20,635	26,222	26,671		
	Ojhar Tambat Canal ..	1,778	1,994	11,962	8,949		
	Wadali Conal ..	2,689	3,273	12,390	10,220		

107. The slight decrease in the area irrigated was due to timely rainfall and consequent decreased demand for canal water.

108. The **cost of the measuring establishment** was 4½ pies per acre, against 5 pies per acre for the previous year.

Storage works with Deccan Catchment.

(24) Parsul Tank.

109. This small tank depends solely on local rains for its supply, which is generally sufficient for the monsoon and a part of the rabi season. The supply during the year was insufficient for irrigation, as only partial replenishment was received owing to scanty rainfall. Water rose to a height of 35 feet on the 21st September 1923, the corresponding contents being 121 million cubic feet. The regular draw-off for irrigation commenced on the 11th October and the supply lasted up to the 15th December when the tank ran dry.

110. The following table shows the results of **irrigation, revenue,** etc., during the year compared with the average :—

Area irrigated.		Assessment.		Gross assessment.	
1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
Acres.	Acres.	Rs.	Rs.	Rs.	Rs.
1,085	684	5,378	2,546	5,458	2,650

Working expenses.		Realisation.		Rainfall.	
1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
1,437	1,219	1,442	3,861	17·82	9·74

111. The increase in the area irrigated and in the assessment was due to timely and ample supply of water in the tank.

112. The **cost of the measuring establishment** was 1 anna 10 pies per acre, against 1 anna 5 pies per acre for the preceding year.

SHOLAPUR DISTRICT.

Storage works with Deccan Catchment.

113. The **area irrigated, gross assessed revenue and working expenses** during the year for the four tanks in this District as compared with the average are given below :—

Name of Tank.	Area irrigated.		Gross assessed revenue.		Working expenses.	
	1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
	Acres.	Acres.	Rs.	Rs.	Rs.	Rs.
1. Ekruk ..	3,043	4,397	1,29,441	1,74,816	20,936	23,283
2. Koregaon ..	476	96	2,901	639	1,666	1,393
3. Ashti ..	3,355	4,078	27,532	36,382	7,423	9,578
4. Pathri ..	1,240	663	11,397	7,480	5,894	6,181

114. The decrease in the area irrigated on the Ekruk and Ashti tanks was due to the deficient storage of water owing to partial failure of the monsoon in the beginning.

(14) Ekruk Tank.

115. The tank registered 17·18 feet of water above the lowest outlet on 1st April 1923, the corresponding contents being 205·11 million cubic feet. Thereafter the level of water went down gradually till it reached 14·67 feet on 1st June 1923. The tank began to receive replenishment from 7th July 1923. A replenishment of about 7·83 feet was received in the tank on 20th July 1923. The last replenishment of about 8 feet was received in the tank between 11th and 30th September 1923. The total height thus available on 30th September 1923 was 31·65 feet over the sill of lowest outlet. This storage was utilized for all the obligatory demands such as the mills, the railway and Sholapur town water-supply. Besides it was utilized for 8 months kharif crops, 47 acres of sugarcane (17 old and 30 new) and rabi crops during the rabi season. The water level thereafter went down gradually till it reached 26·57 feet over the sill of lowest outlet on 31st March 1924.

116. The waste weir did not overflow during the year. The mean rainfall gauged at the five stations in the tank catchment of 159 square miles from 1st June to 31st October 1923 was 18·50 inches. The total replenishment received in the tank during this period was 1,666·52 million cubic feet, the proportion of run off to rainfall being 24 per cent.

(30) Koregaon Tank.

117. On 1st April 1923 the tank was dry. The tank received replenishments between 20th July and 15th September 1923—the first being of 6·50 feet. The tank filled and began to overflow from 16th September 1923 and continued to do so upto 4th October 1923. The storage in the tank was utilized for the demands of all the leaseholders during the rabi season. The level of water remained at 5·40 feet over the sill of outlet at the end of the year.

118. The rainfall gauged at Koregaon from 1st June to 31st October 1923 was 20·82 inches over the catchment of 7 square miles giving a total replenishment of 152·11 million cubic feet the proportion of run-off to rainfall being 45 per cent.

(31) Ashti Tank.

119. The tank registered 6·98 feet of water over the sill of outlet on 1st April 1923. A replenishment of 1·34 feet was received on 20th June 1923 and a subsequent one of about 5 feet between 10th to 20th September 1923. The total height of water reached was 9·67 feet over the sill of outlet, the corresponding capacity being 352·67 million cubic feet. It was utilized for the rabi demands of all the leaseholders to the full extent during the rabi season. The level thereafter gradually went down and the tank was dry on 6th March 1924.

120. The mean rainfall gauged at the two stations in the catchment of 92 square miles was 11·10 inches giving a total replenishment of 283·26 million cubic feet from 1st June to 31st October 1923. The proportion of run-off to rainfall was thus 12 per cent.

(32) PATHRI TANK.

121. On 1st April 1923 the water level was 19·96 feet over the sill of the outlet, the corresponding contents being 136·80 million cubic feet. There was no water available for kharif crops—it being just sufficient in the beginning of the monsoon to meet the full demands of the Barsi town supply. The first replenishment of about 1·58 feet of water was received on 23rd June 1923 and subsequent replenishments from 7th July 1923. The tank filled and the waste weir began to overflow from 19th September 1923 and continued to do so till 29th October 1923. The demands of all the leaseholders were met to the full extent during the rabi season.

122. The mean rainfall gauged at the two stations in the catchment of 27·50 square miles was 22·77 inches giving a total replenishment of 585·30 million cubic feet. The proportion of run-off to rainfall was thus 40 per cent.

AHMEDNAGAR DISTRICT.

Storage works with Deccan Catchment.

(26) BHATODI TANK.

123. The tank is a small one situated on the Mehekari river about 12 miles from Ahmednagar having a storage capacity of 92·70 million cubic feet. It depends entirely on local rains for its supply which generally suffices for the monsoon and a part of the rabi season. The total rainfall during the year was 18·05 inches as against 17·68 inches the average. The tank received its first replenishment on 4th July 1923. The highest water level reached during the year was R. L. 93·60 on 16th September 1923. The tank overflowed from 13th September to 3rd November 1923 and dried up on 8th January 1924.

124. The area irrigated, gross assessment and working expenses are given below and compared with the average :—

Area irrigated.		Total gross assessment from all sources.		Working expenses.	
1923-24.	Average.	1923-24.	Average.	1923-24.	Average
Acres.	Acres.	Rs.	Rs.	Rs.	Rs.
1,094	697	11,268	10,463	10,891	6,246

EAST KHANDESH DISTRICT.

Works without storage but on rivers with ghat catchment.

(23) JAMDA CANALS.

125. The source of supply is the Girna river, supplemented from time to time since 1911-12 by water when available from the Chankapur

tank. On 1st April 1923 the discharge of the river Girna at Wadgaon above the Jamda bandhara was 17 cusecs and it went down to zero on 9th June 1923. The first flood came down the river on 29th June 1923 and the highest flood occurred on 20th September 1923 when the depth of water on the crest of the Jamda weir was 3·40 feet.

126. The subjoined statement shows the **area irrigated** compared with the average and the **corresponding assessment and working expenses :—**

Area irrigated.		Assessment.		Gross assessed revenue.		Working expenses direct and indirect.	
1923-24.	Average.	1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
Acres.	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
801	3,056	3,605	8,822	4,647	13,466	9,062	11,389

127. The decrease under all heads was partly due to the less demand for canal water during the kharif season, as the rainfall was good and partly due to non-realization of any revenue from sale of aloe leaves—two years' proceeds having been recovered in advance during the last year—and no sale of mango fruit as the trees did not blossom.

128. The **cost of crop measurements** per acre irrigated was eighteen pies against ten pies for the previous year.

Storage work with Deccan Catchment.

(21) Hartala Tank.

129. On 1st April 1923 there was no water in the tank. It continued to be dry till 16th July 1923 on which date the first replenishment was received. The tank did not overflow, the maximum level reached being R. L. 85·50 on 25th July 1923, with a capacity of 28·35 million cubic feet. The **rainfall** was 23·44 inches against 26·42 inches of the previous year. Though the rainfall was a little less than the average it was well distributed and there was no increase in the demand for canal water.

(22) Mhaswa Tank.

130. On 1st April 1923 the water was at R. L. 145·40 and the tank contained 73·45 million cubic feet. This level fell to R. L. 142·00 (contents 42·61 million cubic feet) on 23rd June 1923. The first replenishment was received on 24th June 1923. The maximum level was reached on 21st September 1923 when the water rose to R. L. 149·00 representing 119·58 million cubic feet storage the full supply level being R. L. 152·00. The **rainfall** was 15·70 against 15·67 inches of the previous year. There was a small increase in the area irrigated. Generally, rabi crops are irrigated on this tank.

131. The **area irrigated** on the Hartala and Mhaswa tanks compared with the average and corresponding **assessment** and **working expenses** are given in the following statement :—

Name of Work.	Area irrigated.		Assessment.	
	1923-24.	Average.	1923-24.	Average.
	Acres.	Acres.	Rs.	Rs.
Hartala Tank ..	25	36	79	93
Mhaswa Tank ..	156	402	505	1,191

Name of Work.	Gross assessed revenue.			Working expenses.	
	1923-24.	Average.	Outstanding.	1923-24.	Average.
	Rs.	Rs.	Rs	Rs.	Rs.
Hartala Tank ..	732	872	14	926	1,103
Mhaswa Tank ..	2,299	2,262	....	1,831	2,212

132. The **cost of crop measurements** per acre irrigated on the Hartala and Mhaswa tanks was eleven and fifteen pies respectively, against six and four pies for the previous year.

WEST KHANDESH DISTRICT.

Works depending on river supply from Ghat Catchment supplemented by a tank with a Deccan Catchment.

(10) Lower Panjhra River Works.

133. The source of supply of these works is the river Panjhra which is supplemented by the Mukti tank storage when the supply in the river falls short of requirements. The year commenced with a storage of 45·19 million cubic feet in the tank on 1st April 1923 which gradually fell to 3·60 million cubic feet. The first replenishment was received on 3rd July 1923 when the water rose to 55·79 million cubic feet. The maximum storage reached was 313·33 million cubic feet on 7th October 1923. The year closed with a storage of 85·53 million cubic feet. The average **rainfall** guaged in the tank catchment at Dahyana and Sadgaon was 18·92 inches.

134. The following table shows the **area irrigated,** the **assessment** and the **working expenses** as compared with the average :—

Name of Work.	Area irrigated.		Gross assessment.		Working expenses.	
	1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
LOWER PANJHRA RIVER WORKS.	Acres.	Acres.	Rs.	Rs.	Rs.	Rs.
Mukti Tank.						
Patasthal Lands ..	1,624	1,768	27,315	24,187	....	....
Jirayat Lands ..	1,241	765			4,648	9,891
Total ..	2,865	2,553	27,315	24,187	4,648	9,891

135. The area on the Jirayat (dry crop) land was more by 476 acres, due to good demand for water both for kharif and rabi seasons.

136. The **cost of measurement of land irrigated** amounted to Rs. 11-1-6 which gives a rate of one anna and 7½ pies per acre, as against one anna and two pies in the previous year.

Works without storage depending on local rain.

(3) SHAHADA CHANNEL.

137. This channel is fed by the river Gomai which has a perennial supply of water. There is no rain gauge installed on the channel. The **rainfall** at Shahada during the monsoon was 19·66 inches.

138. The following table shows the **area irrigated, net assessment** and **working expenses** compared with the average :—

Year.	Area.	Assessment.	Working expenses.
1923-1924.	Acres.	Rs.	Rs.
Jirayat	1,338	6,174	5,260
Average	833	3,387	Rs. 1,994 for 1922-23 from which year the channel is brought under the head "55."

SATARA DISTRICT.

139. The **area irrigated, gross assessed revenue and working expenses** for the 6 works mentioned below as compared with the average are shown in the following statement :—

Name of Work.	Area irrigated.		Gross assessed revenue.		Working expenses.	
	1923-24.	Average.	1923-24.	Average.	1923-24.	Average.
	Acres.	Acres.	Rs.	Rs.	Rs.	Rs.
1. Krishna Canal ..	9,401	7,779	85,722	55,698	27,801	21,816
2. Rewari Canal ..	259	494	2,507	2,367	2,828	3,753

Name of Work.	Area irrigated.		Gross assessed revenue		Working expenses.	
	1923-24	Average.	1923-24.	Average	1923-24.	Average.
	Acres.	Acres.	Rs.	Rs.	Rs.	Rs.
3. Upper Man River Works ..	555	900	2,537	3,595	3,038	7,719
4. Yerla River Irrigation Works..	5,879	3,698	29,319	17,396	19,212	20,879
5. Chikhli Canal ..	328	496	1,476	1,628	1,052	2,687
6. Maini Tank ..	1,791	2,553	10,325	9,701	4,895	8,931

140. The decrease in the areas irrigated under the Rewari canals, Upper Man River Works, Chikhli canal and Maini tank was due to deficient storage while the increase under the Krishna canal was due to the increased area under irrigation of highly rated crops and hot weather crops. The increase under the Yerla River Irrigation Works was due to insufficient rainfall during both the seasons which caused a great demand for canal water which was met by economical distribution of the supply available in the tank.

River supply with Ghat Catchment.

(15) KRISHNA CANAL.

141. The rainfall gauged at Retre Budruk was 14·21 inches against 26·21 inches the average of past ten years. The river supply was quite inadequate during the late monsoon, rabi and hot weather seasons. The rainfall failed entirely and there was a great rush for canal water both for kharif and rabi crops.

Works with Deccan Catchment.

(33) REWARI CANAL.

142. The rainfall gauged at Rewari was 14·24 inches against 27·54 inches the average of the past ten years. The supply of water available in April 1923 was 5·46 cusecs. In July 1923 the discharge was 5·14 cusecs and it began to go down gradually from that time to the end of March 1924. Water was supplied to the irrigators by rotation and the arrangement worked quite satisfactorily.

(34) UPPER MAN RIVER WORKS.

143. The rainfall gauged at Gondavla was 9·91 inches against 18·75 inches the average of the past ten years. On 1st April 1923 the contents of the Pingli tank were 82 million cubic feet. The tank went dry on 7th August 1923 but a replenishment of 4 million cubic feet was received on 15th September 1923 subsequently the contents rose to 27 million cubic feet but the tank again became dry on 6th November 1923.

(35) YERLA RIVER IRRIGATION WORKS.

144. The rainfall gauged at Khatgaon was 12·50 inches against 22·64 inches the average of the past ten years. On 1st April 1923

water in the Nohr tank was 385 million cubic feet and the water level began to subside till the contents were reduced to 267 million cubic feet including silt. A replenishment of 124 million cubic feet was received on 15th September 1923 making up the total of 391 million cubic feet, the highest contents recorded in the year.

(36) CHIKHLI CANAL.

145. The **rainfall** gauged at Chikhli was 13·16 inches against 22·09 inches, the average of the past ten years. There was no rainfall at all in the rabi season and the supply in the river was very little. There was also no high flood in the river during the year.

(37) MAINI TANK CANAL.

146. The **rainfall** gauged at Maini was 11·49 inches against 22·28 inches, the average of the past ten years. On 1st April 1923 the contents of the tank were 13 million cubic feet and the tank went dry on 12th May 1923. Thereafter replenishments were received which increased the water till the R.L. of tank reached 2303·32, *i.e.*, equivalent to 94·00 million cubic feet on 19th September 1923 which was the highest level reached during the year.

BIJAPUR DISTRICT.

Deccan Catchment.

(38) MUCHKUNDI TANK.

147. The supply in the tank is unreliable owing to the smallness of the catchment area and the precarious rainfall. The **total area irrigated** and **assessment** were 115 acres and Rs. 468 respectively. The **miscellaneous receipts** amounted to Rs. 65. Thus the total assessment of the year was only Rs. 533 while the **working expenses** amounted to Rs. 6,395. The operations of the year resulted in a **net loss** of Rs. 5,862.

BELGAUM DISTRICT.

Deccan Catchment.

(1) GADIKERI TANK.

148. The lands under this tank are assessed at consolidated rates. The **irrigation share of the revenue** was Rs. 1,301. The **working expenses** amounted to Rs. 1,165. The result of the year's operations was a **net profit** of Rs. 136 which is equivalent to a return of 80 per cent. on the capital cost of Rs. 16,918.

Ghat Catchment.

(39) GOKAK CANAL.

149. The **area irrigated** and **assessment** were respectively 9,653 acres and Rs. 49,692 against 8,711 acres and Rs. 42,590 of the previous year and 10,707 acres and Rs. 49,533, the average. The increase in the area irrigated and in the assessment compared with those of the previous year

was due to the keen demand for water in the rabi season on account of scanty rainfall. The figures of the year show a decrease when compared with the average because in the year 1920-21 there was exceptionally heavy irrigation which is mainly responsible for the high average taken for comparison.

150. The **miscellaneous receipts** amounted to Rs. 19,261 against Rs. 20,688 of the previous year. The **assessed gross revenue** was Rs. 68,933 against Rs. 63,278 of the previous year, and Rs. 69,732, the average.

151. The **working expenses** amounted to Rs. 17,902 as compared with Rs. 13,857 in the previous year and Rs. 25,511, the average. The operations of the year resulted in a **net profit** of Rs. 51,051 which gives a return of 3·70 per cent. on the capital outlay of Rs. 13,81,992.

DHARWAR DISTRICT.

Deccan Catchment.

(40) Dambal Tank.

152. The lands under this tank are assessed partly at consolidated rates and partly at water rates. The **area irrigated** and **assessment under water rates** were respectively 27 acres and Rs. 141.

153. The **area of irrigated lands assessed at consolidated rates** was 144 acres and the **irrigation share of the land revenue** was Rs. 916 giving an average water rate of Rs. 6·36 per acre.

154. The **total revenue** including miscellaneous receipts (Rs. 1,605) amounted to Rs. 2,662 against Rs. 2,206 of the previous year and Rs. 2,192, the average.

155. The **working expenses** amounted to Rs. 1,609 as compared with Rs. 2,400 of the previous year and Rs. 2,685, the average. The net result of the year's working was a **profit** of Rs. 1,053 which gives a return of 1·6 per cent. on the capital outlay of Rs. 63,980.

(41) Medleri Tank.

156. The **area irrigated** and **assessment** were 53 acres and Rs. 656 respectively against 130 acres and Rs. 761 in the previous year and 71 acres and Rs. 598, the average.

157. The **total revenue** including miscellaneous receipts (Rs. 30) was Rs. 686. The **working expenses** were Rs. 1,230 against Rs. 1,257 of the previous year and Rs. 1,654, the average. The result of the year's working was the **net loss** of Rs. 544.

Ghat Catchment.

(42) Madag Tank.

158. The **area irrigated** and the **water assessment** were 749 acres and Rs. 4,174 respectively against 707 acres and Rs. 3,459 in the previous

year and 765 acres and Rs. 3,612, the average. The **total assessed revenue** including the miscellaneous receipts (Rs. 574) amounted to Rs. 4,748 against Rs. 3,724 of the previous year and Rs. 3,854, the average.

159. The **working expenses** amounted to Rs. 2,431 against Rs. 2,357 of the previous year and Rs. 2,323, the average. The net result of the year's operations was a **profit** of Rs. 2,317 or 1·32 per cent. on the capital cost of Rs. 1,67,598.

Deccan Catchment.

(43) ASUNDI TANK.

160. The lands under this tank are assessed partly at consolidated rates and partly at water rates. The **unconsolidated area irrigated** and the **water rates assessed** were 110 acres and Rs. 723 respectively against 107 acres and Rs. 613 of the previous year. The **area of land assessed at consolidated rates** was 190 acres and the **irrigation share of the revenue** was Rs. 687 or Rs. 3·62 per acre.

161. The **total assessed revenue** including the miscellaneous receipts (Rs. 18) was Rs. 1,428 against Rs. 1,358 of the previous year and Rs. 1,298, the average.

162. The **working expenses** amounted to Rs. 1,288 against Rs. 686 of the previous year and Rs. 1,060, the average. The result of the year's operations was a **net profit** of Rs. 140 or 0·10 per cent. on the capital cost of Rs. 74,995.

Forest Catchment.

(2) MAVINKOP TANK.

163. The whole of the irrigated area 651 acres is assessed at consolidated rates. The **irrigation share of the land revenue** was Rs. 1,978.

164. The **working expenses** were Rs. 611 against Rs. 777 in the previous year and Rs. 1,822, the average. The operations of the year resulted in a **net profit** of Rs. 1,367 which gives a return of about 4 per cent. on the capital cost of Rs. 33,504.

Ghat Catchment.

(44) DHARMA CANAL.

165. Water was admitted in the canal on the 4th July and the canal ceased to flow on the 25th November 1923.

166. The lands under this canal are assessed partly at water rates and partly at consolidated rates. The **area irrigated under water rates** was 240 acres and the **water rates assessed** were Rs. 1,312 against 482 acres and Rs. 2,527 of the previous year.

167. The **area irrigated at consolidated rates** and the **irrigation share of the land revenue** were 5,227 acres and Rs. 20,765 respectively. The

total revenue from all sources, after deducting Rs. 23,156 to be credited to the old work, amounted to Rs. 1,079.

168. The **working expenses** were Rs. 1,250 against Rs. 1,240 in the previous year and Rs. 2,450, the average. The operations of the year resulted in a **loss** of Rs. 2,329.

169. Statement showing the **rainfall** gauged at the sites of works classed under the head "55" in the Southern Division during the kharif and rabi seasons of 1923-24 as compared with the corresponding figures of rainfall of previous year and the average of the last ten years :—

Year.	Muchkundi tank.	Dambal tank.	Medleri tank.	Madag tank.	Asundi tank.	Gokak canal.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
1923-24 Kharif.	7·05	11·26	11·97	30·46	22·70	13·15
1923-24 Rabi ..	..	0·55	1·31	0·08	1·10	0·63
Total ..	7·05	11·81	13·28	30·54	23·80	13·78
1922-23 Kharif	3·76	7·76	1·34	6·54	18·60	11·27
1922-23 Rabi ..	5·76	10·03	2·70	4·51	10·90	6·42
Total ..	9·52	17·79	4·04	11·05	29·50	17·69
Average of the last ten years	16·70	15·36	14·70	23·91	20·11	18·16

PART II

COMPRISING IRRIGATION WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT.

General Remarks.

170. The whole area of irrigation and revenue due from works for which neither capital nor revenue accounts are kept in the Deccan and Gujarat as recorded in the register of these works is 287,678 acres and Rs. 9,56,324 respectively with the exception of districts for which lists have not yet been prepared. The figures will be modified when new or revised lists are issued.

171. The following table shows the area irrigated in the different districts in the Deccan and Gujarat and the consolidated revenue assessed during the year 1923-24 in respect of irrigation works on which expenditure has been incurred during the year.

TABLE I—Showing the area irrigated in the different districts in the Deccan and Gujarat and the consolidated revenue and water rates assessed and recovered during the year 1923-24 in respect of Irrigation works classed under "Works for which neither capital nor revenue accounts are kept" on which expenditure has been incurred during the year.

Collectorate.	Number of works.	Area irrigated.	Revenue.			Remarks.
			Irrigation share.	Land share..	Total.	
		Acres.	Rs.	Rs.	Rs.	
Ahmedabad ..	22	31	117	235	352	
Kaira ..	25	6,183	4,765 (*a*)	8,586	13,351	(*a*) Includes Rs. 1,015 on account of "water rates" direct receipts.
Panch Mahals ..	19	1,604	5,687(*b*)	190	5,877	(*b*) Includes Rs. 5,072 on account of "water rates" direct receipts.
Surat ..	32	1,851	4,493	19,599	24,092	
Broach ..	1	39	49	173	222	
West Khandesh ..	13	1,163	7,381	1,560	8,941	
East Khandesh ..	..	..	..	..	..	
Nasik ..	42	4,926	31,752(*c*)	9,376	41,128	(*c*) Includes Rs. 294 on account of "water rates" direct receipts.
Poona ..	1	135	728(*d*)	..	728	(*d*) Direct receipts (water rates.)
Sholapur ..	1	771	3,943(*e*)	..	3,943	(*e*) Do. do.
Satara ..	..	..	..	..	..	
Belgaum ..	58	5,946	30,829	7,717	38,546	
Dharwar ..	98	11,214	38,117	9,529	47,646	
Kanara ..	28	2,203	5,422	1,355	6,777	
Bijapur ..	2	180	578	404	982	
Ratnagiri ..	..		....	..	..	
Total ..	342	36,246	1,33,861(*f*)	58,724	1,92,585	(*f*) Direct receipts Rs. 11,052 Indirect receipts Rs. 1,22,809 Total Rs. 1,33,861

TABLE II—Showing actual expenditure and receipts for the year 1923-24 on the Irrigation Works referred to in Table I.

Collectorate.	EXPENDITURE. Direct Charges. Extensions and Improvements.	Maintenance and Repairs.	Establishment.	Tools and Plant.	Total.	Share of Collection Charges.	Grand Total.
1	2	3	4	5	6	7	8
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Ahmedabad ..	8,395 (a) 358	18,619				12	
Kaira ..	21,022	14,688	4,369 (a) 54	129 (a) 13 (b)—*102*	78,833	477	79,695
Panch Mahals	2,274	9,014				373	
Surat ..	..	24,181	1,457	32	26,170	449	26,624
Broach ..	..	500				5	
Kolaba ..	..	135	8	..	143	..	143
West Khandesh ..	39	7,997	1,879	356	10,271	738	11,009
Ahmednagar ..	3,81,589	3,293	89,975	17,018	4,91,875	..	4,91,875
East Khandesh ..	..	..	..	..	..	..	..
Nasik ..	—*18,081*	29,139	3,035	799 (b)—28,212	—13,320	3,161	—*10,159*
Poona ..	20,177	1,150	5,855	812 (b) 665	28,659	36	28,695
Sholapur ..	2	1,970 (c) 247	461 68	87 7	2,520 322	208 ..	2,728 322
Satara ..	..	..	..	..	..	..	..
Belgaum ..	6,356	26,647				3,085	
Dharwar ..	8,345	24,606	33,832	2,731	1,10,691	3,839	1,18,157
Kanara ..	..	7,363		(b) 811		542	
Bijapur ..	..	3,825	1,774	137	5,736	58	5,794
Ratnagiri ..	..	..	..	..	..	..	..
Total Rs. ..	4,30,476	1,73,374	1,42,767	22,121 (b)—26,838	7,41,900	12,983	7,54,883

(a) For work done by the Electrical Engineer.

(b) Suspense Account.

(c) For work done by the Executive Engineers, Malsiras District.

ACTUAL RECEIPTS.

Collectorate.	Direct receipts.			Indirect receipts Share of consolidated revenue.	Grand Total Direct and Indirect receipts.	Less Refunds of Revenue.	Gross Receipts less refunds.
	Water rate from Irrigation.	Miscellaneous	Total.				
9	10	11	12	13	14	15	16
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Ahmedabad ..	..	743	743	117	860	..	860
Kaira ..	1,015	2,253	3,268	3,750	7,018	68	6,950
Panch Mahals ..	5,072	2,623	7,695	615	8,310	..	8,310
Surat ..	..	..	..	4,493	4,493	233	4,260
Broach ..	..	..	..	49	49	..	49
Kolaba ..	..	..	..	..	..	..	..
West Khandesh ..	..	5	5	7,381	7,386	..	7,386
Ahmednagar ..	..	286	286	..	286	..	286
East Khandesh ..	..	..	..	..	..	..	..
Nasik ..	294	..	294	31,458	31,752	..	31,752
Poona ..	728	..	728	..	728	..	728
Sholapur ..	3,943	3,568	7,511	..	7,511	..	7,511
	..	167	167	..	167	..	167
Satara ..	..	..	..	..	..	..	..
Belgaum ..	..	25	25	30,829	30,854	..	30,854
Dharwar	..	274	274	38,117	38,391	..	38,391
Kanara	..	..	..	5,422	5,422	..	5,422
Bijapur ..	..	..	..	578	578	..	578
Ratnagiri ..	..	..	..	..	..	..	..
Total Rs. ..	11,052	9,944	20,996	1,22,809	1,43,805	301	1,43,504

DETAILED REPORTS BY DISTRICT OFFICERS.

Works for which neither Capital nor Revenue Accounts are kept.

AHMEDABAD, KAIRA AND PANCH MAHALS AND SURAT AND BROACH DISTRICTS.

Khari Sluices.

172. As the rainfall at the source of the Khari river was of slight intensity throughout the monsoon, there were no appreciable floods in it and hence there was no irrigation under this system.

173. The sluices were maintained in good repair at a cost of Rs. 4,580.

174. The **miscellaneous revenue** amounted to Rs. 4,785 as against Rs. 8,828 of the previous year.

175. The Goblaj tank, Galki tank and Bherai reservoir were empty.

176. The following table compares the **areas irrigated** and the **assessment levied** with the average :—

	Average of 3 years. ending 1922-1923.		1923-1924.		Remarks.
	Area.	Revenue after deducting remissions.	Area.	*Revenue after deducting remissions.	
	Acres.	Rs.	Acres.	Rs.	
I.— Irrigation above Kalambandi villages (of Mahij, Bidaj and Lali) ..	814	1,756	156	295	
II.—Irrigation from tanks fed by the river Khari :—					
Goblaj	524	2,637	300	1,009	
Galki	263	782	*Nil*	*Nil*	The tank was empty.
III.—Irrigation from the Khari sluices proper (*i.e.*, 10 Kalambandi villages) ..	6,455	17,035	6,183	12,336	
Total ..	8,056	22,210	6,639	13,640	

* The revenue is consolidated.

The decrease in revenue is due to scanty rainfall and consequent want of floods in the Khari river.

177. The assessment under the Khari sluices proper, *i.e.*, of the "Kalambandi villages" being consolidated, the average rates per acre for land and water respectively were as under :—

	Irrigation share.	Land share.	Total consolidated
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Government land	0 13 9	1 13 6	2 11 3
Alienated land	0 5 3	0 14 4	1 3 7

Muwalia Tank.

178. This tank, which is the largest in the Panch Mahals, did not fill to its full capacity owing to deficient rainfall. The maximum water level was 21 feet above sill level and equivalent to 183·85 m.cft. Though

the rainfall was much below the normal the area irrigated during the kharif season was very limited as usual—72 acres only being irrigated against 74 acres in the previous year. In the rabi season the demand for water was so great that 1,042 acres were irrigated against 801 of the previous year which is the highest figure obtained since the construction of the tank. The rainfall gauged in the catchment area of the tank was 18·24 inches. The total **area irrigated** during the year was 1,114 acres against 722 the average while the **gross assessment** amounted to Rs. 3,589 against Rs. 2,279 the average. The **miscellaneous revenue** realised including tank bed cultivation was Rs. 889 and the tank and the canals were maintained in good condition at a cost of Rs. 3,838.

Improvements to 4 tanks in the Ahmedabad District and 13 in the Kaira and Panch Mahals District costing Rs. 28,889 and repairs to 17 tanks in the Ahmedabad, 19 in the Kaira and Panch Mahals and 33 in the Surat and Broach Districts costing Rs. 50,406 were executed. Most of the tanks and bunds in the Ahmedabad, Kaira and Panch Mahals Collectorates were empty. Only a few in the Dohad and Jhalod Talukas had some replenishment which was hardly sufficient for any irrigation.

179. The **area irrigated** and **revenue derived** from the old irrigation tanks and bunds were as under :—

Districts.	Area irrigated.	Revenue.		
		Irrigation share.	Land share.	Total net consolidated assessment.
	Acres.	Rs.	Rs.	Rs.
Ahmedabad	4,541	1,835	23,764	25,599
Kaira	*Nil.*	*Nil.*	*Nil.*	*Nil.*
Panch Mahals	170	615	190	805
Surat	1,442	3,527	14,436	17,963
Broach	546	1,258	4,124	5,382
Total ..	6,699	7,235	42,514	49,749

180. The drainage channels in the **Ahmedabad, Kaira and Panch Mahals and Surat and Broach Districts** were maintained in good order at a cost of Rs. 7,000, Rs. 4,236 and Rs. 7,225 respectively and the protective and reclamation works in the last named District were maintained and repaired at a total cost of Rs. 8,128.

The **miscellaneous receipts** realised during the year were Rs.14,541.

181. The year was one of scarcity due to the failure of rains. Rice crops totally failed. The irrigation revenue was not in the circumstances satisfactory.

POONA IRRIGATION DISTRICT.

Khamgaon Tank.

182. This partially completed famine tank received no replenishment during the monsoon season. It could not be supplied with any water from the Mutha Right Bank Canal also due to a very keen demand for monsoon water in the canal tract, especially in the tail portion, owing to deficient rainfall. It however received some replenishment from local rains during the rabi season, and water was supplied to 135 acres of kharif and rabi crops, which brought in a gross assessed revenue of Rs. 662, the corresponding figures for the previous year being 162 acres and Rs. 712 respectively.

183. The sub-joined table gives the **area irrigated** and the **consolidated assessed revenue,** etc., for the irrigation works in the Poona Collectorate during the year compared with the average :—

Period.	Area irrigated.	Net consolidated revenue.		
		Irrigation share.	Land share.	Total.
	Acres.	Rs.	Rs.	Rs.
For the year 1923-24 ..	674	4,421	1,284	5,705
Average	700	4,401	1,278	5,679

184. No expenditure was incurred on these works during the year.

NASIK IRRIGATION DISTRICT.

Khirdi-Sathe Tank.

185. This small tank did not fill during the year owing to failure of the rains, and the supply was therefore insufficient. It stored water only 8·70 feet above the sill of outlet, which lasted up to the 1st February 1924, when the tank ran dry. The total **area irrigated** was 46 acres of kharif and rabi crops, and the **gross revenue** was Rs. 149, the corresponding figures for the preceding year being 129 acres and Rs. 488 respectively.

186. The water supply to the various bandharas continued to be generally inadequate, though it was better than the average. Remissions amounting to Rs. 39,324 were granted. The sub-joined table compares the year's results as regards **area irrigated** and **consolidated revenue,** etc., with the average :—

Period.	Area irrigated.	Net consolidated revenue (after deducting remissions).		
		Irrigation share.	Land share.	Total.
	Acres.	Rs.	Rs.	Rs.
For the year 1923-24 ..	26,077	1,54,253	49,970	2,04,223
Average	25,022	1,25,225	49,557	1,74,782

187. The expenditure during the year on these works was Rs. 34,488 exclusive of charges for establishment and tools and plant.

EAST KHANDESH DISTRICT.

188. The area irrigated and revenue derived from each of the old works are shown below :—

	Name of work.	Area irrigated.	Revenue.		
			Irrigation share.	Land share.	Total.
		Acres.	Rs.	Rs.	Rs.
1	Patonda bandhara and channel	129	782	306	1,088
2	Toli channel ..	61	732	175	907
3	Amalner bandhara and channel	371	2,854	1,151	4,005
	Total ..	561	4,368	1,632	6,000

WEST KHANDESH DISTRICT.

Talwada Tank.

189. The rainfall during the year was 12·38 inches against 8·92 inches of the preceding year. The tank was dry till 18th September 1923. The first replenishment brought in 7·47 million cubic feet of water. The maximum replenishment received was 18·39 million cubic feet on 20th September 1923. The tank became again dry on 23rd January 1924.

No area was irrigated during the kharif season. The area irrigated during the rabi season was 72 acres 6 gunthas and the assessment for the same was Rs. 509-6-0. The tank was maintained at a cost of Rs. 338.

190. The area irrigated and revenue derived from the old works are as shown below :—

Year.	Area irrigated.	Revenue.		
		Irrigation share.	Land share.	Total.
	Acres.	Rs.	Rs.	Rs.
1923-1924	8,133	60,409	11,432	71,841
Average ..	8,671	64,668	14,789	79,457

191. The outlay on these works was Rs. 8,136 against Rs. 7,221 the average.

192. Expenditure as noted against each of the following old bandharas and channels mentioned below was incurred during the year :—

		Rs.
1.	Repairs to Lower Dahiwel bandhara and channel ..	1,586
2.	Repairs to Sutare Dahiwel bandhara and channel ..	1,190
3.	Repairs to Malpur channel	3,603
4.	Repairs to Akhade bandhara and channel ..	477
5.	Repairs to Khandbara bandhara and channel ..	631
6.	Repairs to Warsus bandhara and channel.. ..	706
7.	Repairs to Lower Kusumba bandhara and channel ..	851
8.	Repairs to Bhadne bandhara and channel ..	1,199
9.	Repairs to Lower Dusane bandhara and channel ..	46

SATARA DISTRICT.

Borgaon Dam and Sap Bandhara.

193. The total **area irrigated** was 117 acres and the **consolidated assessment** charged was Rs. 1,716. The **irrigation share of the revenue** amounted to Rs. 1,107. The balance of Rs. 609 represented **land assessment.**

SHOLAPUR DISTRICT.

Wadshivne Tank.

194. The level of water on 1st April 1923 was 3·07 feet above the sill of outlet. A replenishment of 3·26 feet was received on 29th June and 7·60 feet between July and middle of September 1923. This storage became available from about the end of September 1923. There being insufficient water available during the kharif season no kharif irrigation was done. The storage available was utilised for the rabi demands of the irrigators. The waste weir did not overflow during the year.

195. The **rainfall** gauged at Wadshivne was 15·34 inches giving a replenishment of 89·04 million cubic feet from the catchment of 14·5 square miles. The proportion of runoff to rainfall was 17 per cent.

196. The **area irrigated** was 770 acres against 1,050 acres the average. The decrease was due to the insufficient storage in the tank.

197. The **gross revenue** assessed was Rs. 6,404 against Rs. 5,253 the average. The increase was due to the sale of wood in the tank contour.

198. The **expenditure** incurred on maintenance and repairs was Rs. 1,365 against Rs. 1,182 the average.

BIJAPUR DISTRICT.

199. There are in all 13 tanks in the Bijapur District. The lands under these tanks are assessed at consolidated rates. The total area irrigated and the irrigation share of the land revenue were 436 acres and Rs. 3,715 respectively against 1,083 acres and Rs. 3,861 in the previous year and 1,223 acres and Rs. 3,502 the average.

RATNAGIRI DISTRICT.

200. There are only four irrigation tanks in the Ratnagiri District. The area irrigated by these tanks and the irrigation share of the land revenue were 1,273 acres and Rs. 4,142 respectively against 1,224 acres and Rs. 4,142 in the previous year.

DHARWAR IRRIGATION DISTRICT.

201. There are nearly 4,700 tanks in this District, most of which have no proper arrangement for waste weir and outlets. This year 97 tanks were repaired at a cost of Rs. 59,177.

202. During the year 96,433 acres were irrigated against 96,692 in the previous year. The irrigation share of the land revenue amounted to Rs. 2,56,542 against Rs. 2,55,662 in the previous year and Rs. 2,80,818 the average. The decrease in the revenue as compared with the average was due to the remissions of Rs. 66,419 granted during the year.

Revenue Report of Irrigation works in the Bombay Presidency excluding Sind for 1923-24—Review of

GOVERNMENT OF BOMBAY.

PUBLIC WORKS DEPARTMENT.

Resolution No. P.—19/7866.

Bombay Castle, 18th September 1925.

Letter from the Superintending Engineer, Northern Circle, No. 7024, dated 13th October 1924.

Submits the Irrigation Revenue Report for his Circle for 1923-24. together with two statistical statements and makes remarks.

Letter from the Superintending Engineer, Northern Circle, No. 7203, dated 18th October 1924.

Submits certain corrected figures for insertion in the Revenue Report.

Letter from the Superintending Engineer, Deccan Irrigation Circle, No. 5710, dated 23rd October 1924.

Submits the Irrigation Revenue Report for his Circle for 1923-24.

Letter from the Superintending Engineer, Deccan Irrigation Circle, No. 5732, dated 24th October 1924.

Submits the general remarks in connection with the Irrigation Revenue Report.

Letter from the Superintending Engineer, Southern Circle, No. R—4, dated 8th November 1924.

Submits the Irrigation Revenue Report for his Circle for 1923-24.

Letter from the Superintending Engineer, Central Circle, No. 9121, dated 11th November 1924.

Submits the Irrigation Revenue Report for his Circle for 1923-24.

Letter from the Superintending Engineer, Central Circle, No. 93, dated 12th January 1925.

Submits the general remarks in connection with the Revenue Report.

Letter from the Accountant General, Bombay, No. B.K.—23/1/2959, dated 3rd April 1925.

Forwards two statistical tables in connection with Part II of the Irrigation Revenue Report, Deccan and Gujarat, for 1923-24 and reports the figures of total area under irrigation and total revenue due from works for which neither capital nor revenue accounts are kept.

RESOLUTION.—The irrigation works dealt with in this report are divided into two categories, *viz* :—

(i) Tanks and canals for which capital and revenue accounts are kept.

(ii) Small tanks, bandharas and drainage channels for which neither capital nor revenue accounts are kept.

A detailed account of the works included under (i) above is given in Part I of the report. The works mentioned under (ii) are small and numerous and a brief general account of them is given in Part II.

2. The total capital outlay on tanks and canals for which capital and revenue accounts are kept up to the year under review was Rs. 8,81,18,054. During the year a sum of Rs. 41 lakhs was spent on the Nira Right Bank Canal and Rs. 8 lakhs on the Pravara Canals the two important irrigation works under construction in the Deccan. The progress made on these works is described in paragraphs 52, 83 and 84 of the report.

3. The total area irrigated was 258,054 acres, exclusive of 9,328 acres on which a consolidated water and land assessment is levied and was less by 20,148 acres than the area irrigated of the previous year. The decrease occurred in the Northern and Deccan Irrigation Circles owing to deficient rainfall.

4. The gross assessed revenue amounted to Rs. 28,47,586 as against Rs. 26,25,308 of the previous year. The increase in the assessed revenue is due mostly to the development of sugarcane area on the Godavari and Pravara Canals.

5. The unrealized balance at the close of the year amounted to Rs. 8,69,182. It is reported that a large portion of this amount has since been recovered and that steps have been taken to recover the balance.

6. The working expenses amounted to Rs. 11,23,776, showing an increase of Rs. 1,04,367 as compared with the figure of the previous year (Rs. 10,19,409). The main increases were in the Central and Deccan Irrigation Circles.

7. The resulting net revenue for the year was :—

	Rs.
(1) On the basis of assessment	17,23,810
(2) On the basis of realization	13,41,149

as compared with Rs. 16,05,899 and Rs. 15,25,876 respectively during the previous year.

8. The statement embodied in paragraph 13 of the report exhibits the financial results based on actual figures, of the more important irrigation works in operation in the Presidency proper. The Ekruk Tank shows a return of more than 8 per cent. on the capital outlay. The Nira Canal including the Shetphal tank, the Mutha and Godavari Canals yielded only 5·25, 2·91 and 2·85 per cent. respectively during the year.

9. The total area irrigated by works for which neither capital nor revenue accounts are kept was 150,454 acres and the revenue obtained was Rs. 5,84,854. During the year a sum of Rs. 7,54,883 was spent on

gitized with financial assistance from th
Government of Maharashtra
on 22 July, 2017

the improvement and repair of 342 small tanks and bandharas out of an approximate total on the list of nearly 11,000.

10. The officers in the Deccan and Gujarat are thanked for the efficient management of the works during the year.

11. Copies of the report and of this review should be forwarded to the Government of India and the Secretary to the High Commissioner for India.

By order of the Governor in Council,

W. N. CARTLAND,
Under Secretary to Government,
Irrigation and Railways.

To

The Revenue Department, Secretariat.
The Finance Department, Secretariat.
The Commissioner in Sind.
The Commissioner, Northern Division.
The Commissioner, Central Division.
The Commissioner, Southern Division.
The Director of Agriculture.
The Settlement Commissioner and Director of Land Records.
The Chief Engineer in Sind.
The Chief Engineer, Lloyd Barrage and Canals Construction.
All Superintending Engineers of Circles.
The Accountant General, Bombay.
All Executive Engineers in charge of Irrigation Works in the Deccan and Gujarat.
The Government of India.
The Secretary, Revenue and Statistics Departments, India Office.
The Secretary, Public Works Department, India Office.
The Registrar and Superintendent of Records, India Office.
The Secretary to the High Commissioner for India.

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